

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Judith L. Erb, et al

Divisional Application of
Serial No.: 09/045,224

Filed: Herewith

For: METHOD AND APPARATUS FOR MEASUREMENT OF THE
EFFECT OF TEST COMPOUNDS ON SIGNAL TRANS-
DUCTION AT THE LEVEL OF BIOLOGICAL RECEPTORS

Attorney Docket No.: 3060.00021

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231
Box Divisional Application

Sir:

Please preliminarily amend the above application prior to
consideration of the application on its merits, consistent with the instructions
found attached hereto:

IN THE SPECIFICATION:

CROSS-RELATED REFERENCE SECTION

This application is a divisional of United States Patent Application Serial No. 09/045,224, filed March 20, 1998.

IN THE CLAIMS:

43. (New) An apparatus for screening pharmacological agents for agents which induce regression of cancer, said apparatus comprising:
an evanescent sensing device;
at least one sensor having affixed to its surface molecules of a first type, which have affinity for molecules of a biological receptor, the surface molecule and receptor molecule combination having the effect that, *in vivo*, the binding affects the rate of transcription of gene products; and
a molecular tag wherein said molecular tag is bound to said sensor wherein the binding between molecules of the first type and molecules of biological receptor cause the tag to produce, an alteration in signal recorded by said evanescent sensing device, said tag also being bound to molecules of a second type, said molecules of second type having affinity for said receptor molecules.

44. (New) The apparatus according to claim 43, wherein said molecules of the second type are antibodies to said receptor.

45. (New) The apparatus according to claim 44, wherein said apparatus also includes a sample of tumor tissue.

46. (New) A method for screening pharmacological agents to determine agents which induce regression of a cancer by;
contacting extract from a tumor tissue biopsy with a molecular tag, thereby causing the tag to bind to receptor molecules present in the tumor tissue biopsy;

flowing the tag sample extract through a sensor according to claim 43 and recording the time course of signal observed by an evanescent sensing device;

introducing pharmacological agents to be assessed into the tag sample extract;

flowing said tag sample extract through the sensor again and recording the time course of signal observed by the evanescent sensing device; and

using the data to evaluate the impact of the pharmacological agent on the rate of transcription of gene products.

47. (New) An apparatus for screening pharmacological agents for agents which induce regression of cancer, said apparatus comprising:

an evanescent sensing device;

at least one sensor having affixed to its surface molecules of a first type, which have affinity for molecules of a biological receptor, the surface molecule and receptor molecule combination having the effect that, *in vivo*, the binding affects the rate of transcription of gene products; and

a molecular tag which produces an alteration in signal recorded by said evanescent sensing device upon the binding between molecules of the first type and molecules of biological receptor, said tag also being associated with molecules of the first type.

48. (New) The apparatus according to claim 44, wherein said apparatus also includes a sample of tumor tissue.

49. (New) A method for screening pharmacological agents to determine agents which induce regression of a cancer by;

flowing an extract of tumor tissue through a sensor according to claim 47 and recording the time course of signal observed by an evanescent sensing device;

introducing pharmacological agents to be assessed into the sample extract;

flowing said sample extract through the sensor again and recording the time course of signal observed by the evanescent sensing device; and

using the data to evaluate the impact of the pharmacological agent on the rate of transcription of gene products.

REMARKS

Claims 43-49 are currently pending in the application. Claims 43, 46, 47 and 49 are in independent form.

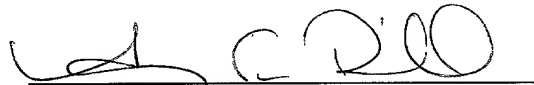
The above amendment adds no new matter and is merely made to more accurately describe and claim the invention and to claim benefit of priority.

It is respectfully submitted that the application is now in condition for allowance, which allowance is respectfully requested.

The Commissioner is authorized to charge any fee or credit any overpayment in connection with this communication to our Deposit Account No. 11-1449.

Respectfully submitted,

KOHN & ASSOCIATES



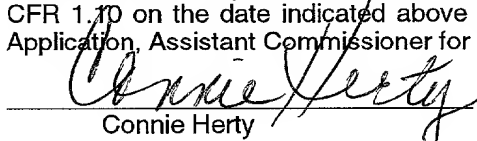
Amy E. Rinaldo
Registration No. 45,791
30500 Northwestern Highway
Suite 410
Farmington Hills, MI 48334
(248) 539-5050

Dated: July 20, 2001

CERTIFICATE OF MAILING BY "EXPRESS MAIL"

Express Mail Mailing Label No.: EL681893090US
Date of Deposit: July 20, 2001

I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office To Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to: Box Divisional Application, Assistant Commissioner for Patents, Washington, DC 20231.



Connie Herty

VERSION WITH MARKINGS TO SHOW CHANGES MADE**IN THE SPECIFICATION:**

Page 1, after "In the Specification", please insert:

--CROSS-RELATED REFERENCE SECTION

This application is a divisional of United States Patent Application
Serial No. 09/045,224, filed March 20, 1998.--

CLAIMS:

Please cancel claims 1-42.

43. (New) An apparatus for screening pharmacological agents
for agents which induce regression of cancer, said apparatus comprising:

an evanescent sensing device;

at least one sensor having affixed to its surface molecules of a
first type, which have affinity for molecules of a biological receptor, the
surface molecule and receptor molecule combination having the effect that, *in*
vivo, the binding affects the rate of transcription of gene products; and

a molecular tag wherein said molecular tag is bound to said
sensor wherein the binding between molecules of the first type and molecules
of biological receptor cause the tag to produce, an alteration in signal
recorded by said evanescent sensing device, said tag also being bound to
molecules of a second type, said molecules of second type having affinity for
said receptor molecules.

44. (New) The apparatus according to claim 43, wherein said
molecules of the second type are antibodies to said receptor.

45. (New) The apparatus according to claim 44, wherein said
apparatus also includes a sample of tumor tissue.

46. (New) A method for screening pharmacological agents to determine agents which induce regression of a cancer by;

contacting extract from a tumor tissue biopsy with a molecular tag, thereby causing the tag to bind to receptor molecules present in the tumor tissue biopsy;

flowing the tag sample extract through a sensor according to claim 43 and recording the time course of signal observed by an evanescent sensing device;

introducing pharmacological agents to be assessed into the tag sample extract;

flowing said tag sample extract through the sensor again and recording the time course of signal observed by the evanescent sensing device; and

using the data to evaluate the impact of the pharmacological agent on the rate of transcription of gene products.

47. (New) An apparatus for screening pharmacological agents for agents which induce regression of cancer, said apparatus comprising:

an evanescent sensing device;

at least one sensor having affixed to its surface molecules of a first type, which have affinity for molecules of a biological receptor, the surface molecule and receptor molecule combination having the effect that, *in vivo*, the binding affects the rate of transcription of gene products; and

a molecular tag which produces an alteration in signal recorded by said evanescent sensing device upon the binding between molecules of the first type and molecules of biological receptor, said tag also being associated with molecules of the first type.

48. (New) The apparatus according to claim 44, wherein said apparatus also includes a sample of tumor tissue.

49. (New) A method for screening pharmacological agents to determine agents which induce regression of a cancer by;

flowing an extract of tumor tissue through a sensor according to claim 47 and recording the time course of signal observed by an evanescent sensing device;

introducing pharmacological agents to be assessed into the sample extract;

using the data to evaluate the impact of the pharmacological agent on the rate of transcription of gene products.